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**REMARKS**

The Examiner is thanked for review of the application. Claims 1-36 are pending. All claims are rejected. Claim 8 is rejected only under 35 USC §112. By this amendment, claim 2 is canceled without prejudice. Claims 1, 12, 14 15, 17, 21, 22, 30 and 36 are amended and claim 2 is canceled. Claims 1 and 17 are amended to change "acts as" to "is" as suggested by the Examiner; and, claim 1 is further amended to add the polymers of now canceled claim 2, with the exception of deleting acrylamide copolymers, and to add the amount of the polymer used. Support for the range may be found at least on page 12, line 30. Claim 12 is amended to add the polymers of now canceled claim 2, with the exception of deleting acrylamide copolymers. Claim 14 is amended to change 0.001% to 0.0001% to correct a typographical error (see page 12, line 30), and further to change 10% to 5% (Page 12, line 30). Claim 15 is amended to delete the polymers which now are listed in the parent's claim 12 and to change 10% polymer to 5% polymer, as discussed above. Claim 21 is amended to add that the polymers are "water soluble", and this amendment is supported by the term "aqueous" in the preamble and by "water soluble" on page 6, line 11. Claim 21 further is amended to change 10% to 5% as discussed above. Claim 22 is amended to delete acrylamide copolymers, and Claim 30 is amended to add the amount of the polymer. Claims 34 and 36 are amended to change 10% polymer to 5% polymer as discussed above. No new matter is added by this amendment as all changes are supported by at least the original claims and the cited lines of the specification.

**35 USC §112 REJECTIONS**

Claims 3, 4, 12, 17, 23, 30, 34 and 36 are rejected as indefinite because the molecular weight values lack a unit such as Dalton's. Applicants note that this is a term of art well known in the art. Applicants further note that the cited reference 5,068,099 does not identify units for molecular weight values. The Dalton unit is the measure of atomic mass unit (CRC Handbook of Chemistry & Physics; 67<sup>th</sup> Edition; 981-1982; F106). Molecular weight, by definition, is the sum of the atomic weights of all atoms making up a molecule. Therefore, those skilled in the art would understand that

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molecular weight means Dalton units. Further, those skilled in the art would find sufficient teachings in the instant specification of this well known property on page 6, lines 14-17, specifically "The molecular weight of a high molecular weight polymer is measured by using well-known chemical and physical methods. These methods include colligative property measurement, light-scattering techniques, GPC analysis, ultra centrifugation and the like."

Claims 1 and 17 have been amended to obviate the Examiner's objection to the use of "acts as", which was replaced with "is".

Applicants believe that the amendments discussed above obviate all §112 rejections and that claim 8 is now allowed. When this claim is allowed, Applicants will incorporate the limitations of claim 8 into claim 1.

### **35 USC §102 REJECTIONS**

Claims 1, 2, 3, 4, 7, 9 and 12-16 are rejected as anticipated by Sramek (US 5,068,099). It is the Examiner's position that even though "Sramek does not specifically disclose the anti-misting reduction of the polymer-formulated composition compared to the nonpolymeric-formulated composition, this property is considered to be inherent because the disclosed reduced aerosol compositions of Sramek possess the claimed components."

Applicants respectfully submit that, contrary to the Examiner's assertions, the burden of proof has not been shifted to applicants because the compositions in Sramek are not identical to the claimed compositions. Sramek teaches, for example, the use of 1 to 10% of two polymers, copolymers, and teaches away from the use of a single polymer. Please see comparative examples 9 and 10, in which the single polymer composition (10) is not selected in comparative tests; and, see the examples and Claim 1 showing that the amount of polymer is 1% to 10%. There is no teaching in Sramek of the use of levels of polymer as low as 0.0001% to 5.0% of a polymer selected from polyethylene oxide, polyacrylamide, substituted acrylamides and gums, and the claimed smaller amounts of polymer are not inherent (Claim 1). Additionally, the Examiner's inherency argument cannot be applied to Applicants' claims 12, 13 and

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14 all of which claims recite an aqueous composition with the presence of enzyme, which presence and which aqueous nature results in a significantly different composition from the solvent based Sramek compositions. Sramek does not teach the use of enzymes in the solvent based compositions which means that the Sramek solvent based compositions are different from the compositions in the cited claims and the inherency argument of the Examiner must be withdrawn since there is no basis to conclude that chemically different compositions would have the same properties. Applicants further wish to stress that Sramek is concerned with lowering the discharge rate of an aerosol dispenser without changing the average particle size of the dispensed composition. Sramek does not teach or suggest that the copolymers chosen to accomplish this lowered discharge rate are anti-misting agents that increase a  $Dv_{50}$  of a personal care or cleaning product. Sramek assesses the solvent based compositions with respect to body, soft feel, hold, and spray clogging (See Col. 17, lines 3-20), and does not mention or teach anything about anti-misting or increases in particle size.

The Examiner also stated that Claims 1-6, 10, 12, 13, 15-19, 30 and 33-36 are anticipated by Aubay et al. (US 6,53,288). It is the Examiner's view that the quaternary ammonium copolymer taught in Aubay et al. has a hydrophilic property that reduces mist on surfaces. The Examiner does admit that Aubay et al. do not "specifically disclose the anti-misting reduction of the polymer-formulated composition compared to the nonpolymeric-formulated composition, the property is considered to be inherent because the disclosed reduced misting compositions of Aubay possess the claimed components."

Applicants again respectfully disagree with the Examiner's conclusions about inherency and further believe that the claims, as amended, obviate the rejection. The effect of the specific quaternary ammonium copolymer taught by Aubay et al. cannot be inherently applied to, as in Claim 1, polymers of polyethylene oxide, polyacrylamide, substituted acrylamides and gums. The compositions are chemically different; therefore, there is no basis to conclude that the compositions inherently have the same properties. Applicants further submit that the reduction in misting taught by Aubay et al. relates to surface active properties that reduce fogging of and condensation on

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surfaces, such as mirrors, and there is no discussion of aerosol particles as defined on page 7 of Applicants' specification as "airborne dispersions of small particles or droplets that when dispensed into the atmosphere remain suspended or are transported by the atmosphere for a substantial period of time. The inherency argument further falls since there is no teaching in Aubay et al. of polymer concentrations ranging from as low as 0.0001% to 5.0% as in claim 1.

### **35 USC §103 REJECTION**

Claims 1-6 and 10-36 are rejected over Aubay et al. in view of Cho et al. (US 6,835,703). It is the Examiner's position that Cho et al. teach proteases that are from 0.01% to about 10.0% by weight of detergent and that propylene glycol is used as an enzyme stabilizer. Further, the Examiner states that Cho et al. advise that "polymers that comprise thickeners should be dispersed in a non-aqueous ingredient prior to combining it with an enzyme to ensure better dispersal and mixing with the enzyme. A thickener is a high molecular weight polymer such as Carbopol. Cho discloses that the mixing of the composition can be done at a temperature of about 30 degrees or less. This disclosure meets the limitations of "at about 35 degrees C" in instant claim 32 because, in the absence of a definition, about is interpreted to mean  $\pm 5$  degrees." The Examiner then concludes that it would be obvious

"to employ an amylase or protease at the claimed concentrations in the detergent composition of Aubay, wherein the enzyme is stabilized by propylene glycol, or the order of adding the high molecular weight polymer to the enzyme. The ordinary artisan would have been motivated to employ the enzymes at the recommended concentrations and enzyme-stabilizers in the composition and method of Aubay because the employment of amylases and proteases at the given concentrations and the use of enzyme stabilizer in detergent compositions is well known in the art. Hence, the selection of appropriate detergent enzymes, concentration thereof and enzymes stabilizers would have been a routine matter of selection by the ordinary artisan. The ordinary artisan would have been motivated to dissolve a very high molecular weight polymer disclosed by Aubay in a non-aqueous solvent before combining it with the enzyme because very high molecular weight polymers, like thickeners, are viscous and do not mix easily. Hence the ordinary artisan would have realized the advantage of dispersing a viscous polymer in a non-aqueous solvent to enhance mixing with an enzyme in

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an aqueous composition. The ordinary artisan would have had a reasonable expectation that the dispersal of the very high molecular weight polymers taught by Aubay in a non-aqueous solvent would be successful because said polymers taught by Aubay are, like thickeners, viscous materials."

At the outset, Applicants wish to point out to the Examiner that none of the cited references teaches or suggests anything about undesirable properties of aerosols and the need to increase a  $Dv_{50}$  by 10-200% resulting in a reduced aerosol generation as in claim 34. Because none of the references teach anything about the need to reduce aerosols, there can be no motivation to combine the references to achieve a reduction in aerosols. Anti-misting agents are defined by Applicants on page 6 of the specification as agents that reduce aerosol generation, and aerosol particles are discussed on page 7 as particles that remain suspended or transported by the atmosphere for a substantial period of time. While Aubay et al do use the term "mist", clearly the use of the term is confined to condensation on a surface, as discussed above, and does not have anything to do with airborne particles. In view of the differences in the chemistry of the prior art compositions as compared to the chemistry of the claimed compositions, for example, the failure of any of the cited references to teach levels of polymer as low as 0.0001% (Claims 1, 30, 36), and the use of copolymers in Sramek and Aubay, there is no expectation that the compositions function in the same way or would produce the same result as the claimed anti-misting compositions.

The addition of Cho et al. does not cure the deficiencies in the Examiner's arguments. Cho et al teach that liquid automatic dish detergents (LADDs) with a pH value less than 7.0 are superior to LADDs within alkaline pH. (Col. 1, 46-51). Cho et al. also utilize thixotropic thickeners in the amount of 0.05 to 10.0% of the detergent. The enzyme stabilizer taught by Cho et al. is utilized in the amount of 0.01 to 30% (Col. 3, 139-41).

Thus the references alone, or in combination, do not teach or disclose the use of as little as 0.0001% to 5.0% of the polymers as in claims 1, 15, 21, 30, 34, and 36; none of the references provide a composition that results in a product wherein a  $Dv_{50}$  of the product is between 10 to 200% greater than the  $Dv_{50}$  of a corresponding non-formulated

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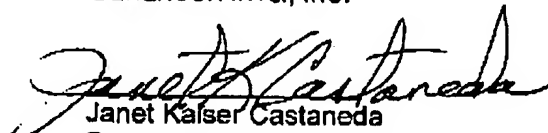
product (Claims 12 and 34); and none of the references provide a composition that decreases enzyme exposure (Claims 17 and 34).

### CONCLUSION

In light of the above amendments, the Applicants believe all of the pending claims are in condition for allowance and issuance of a formal Notice of Allowance at an early date is respectfully requested. Applicants assume that claim 8 is allowable. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (650) 846-4072.

Respectfully submitted,  
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Date: December 21, 2006

  
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